# Chapter 9
# Nonhuman Primate Trade in the Age of Discoveries: European Importation and Its Consequences

**C. Veracini**

**Abstract** The history of interactions between humans and non-human primates is simultaneously complex and fascinating. Since ancient times, human beings have interacted with non-human primates, sometimes shaping the latter populations' abundance and geographical distribution. In the Age of Discovery (fifteenth and sixteenth centuries) Europeans came in contact with sub-Saharan African and New World primates for the first time and began the first large-scale trade of these primates. They were introduced to Europe in great number being a significant part of the revenue from the trade in natural products with Africa and the Americas. The current work presents the results of a review of literary and iconographic sources of this period which contain data on African and New World primates. These sources suggest that primates were a constant presence and very sought after animals in all the phases of European expansion. They represented an authentic status symbol for nobles and wealthy citizens who used them to underscored their influence, prestige and social position. This work will also include some considerations on the consequence of this trade on primate populations.

## 9.1 Introduction: Human and Non-human Primate Interactions in the Western World

The interactions between humans and non-human primates (referred to as "primates" from here onwards) date back to ancient times. Its study is a complex area of research that includes many different disciplines such as history, the history of natural science, primatology, anthropology, archeozoology, ecology and ethnoprimatology. According to recent studies in ethnoprimatology, primate populations have been influenced by or been forced to respond to human activities in their recent or evolutionary histories (Fuentes 2006). Geographical distribution, abundance and

C. Veracini (✉)
ISCSP–CAPP, Universidade de Lisboa, Lisbon, Portugal
e-mail: cveracini2011@gmail.com

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interspecies interactions of primate populations are in many cases the result of human pressure and action (Masseti 2010). Moreover, there is an emerging consensus that the interface between human and non-human primates needs to be more documented both in the present and in the past (Fuentes 2007). This is also demonstrated by the recent interest of Early Modern historiography in studies on animals and their meaning in human culture (e.g. Fudge 2002; Cuneo 2014)

Since ancient times, primates have always been assigned a distinct place in the human imagination because of their similarities with human beings (Corbey and Theunissen 1995; Groves 2008). They have often played a role in the central debates concerning human nature and human origins, acting as a vehicle of moral and cultural criticism, and being sometimes persecuted or adored according to different cultures' interpretations (Janson 1952; Corbey and Theunissen 1995; Corbey 2005). In the Western world, primates have been invested with various meanings, both positive and negative, but have always occupied a significant place in the culture. African Primates such as the Barbary macaque (*Macaca sylvanus* Linnaeus, 1758), baboons (*Papio* spp. Erxleben, 1777), and grivet or tantalus monkeys (*Chlorocebus* spp. Gray, 1870), were well known in the Greek and Roman worlds (Groves 2008; Masseti and Bruner 2009). Monkeys as well as other exotic animals were often housed in private *menageries* or used as pets by wealthy citizens (Toynbee 1973). These animals have been described, often using mixtures of reality and mythology, by ancient natural philosophers and historians (among them Agatharchides, Herodotus, Aristotle, Galen, Strabo, and Pliny the Elder) (McDermott 1938; Groves 2008). Primates, as other animals with commercial value, were imported mostly from the North of Africa and Eastern sub-Saharan Africa where traders followed ancient Egyptian trade routes. During the Medieval period, monkeys were among the favoured pet species in Europe, together with small dogs, cats, birds, squirrels, ferrets and rabbits (Walker – Meikle 2012). The practice of keeping monkeys in captivity mainly as pets at that time, is well known. Monkeys were expensive high-status pets and were the favourite also among high prelates that liked to keep them at home (Walker – Meikle 2012). The most popular types of monkeys were tailed monkeys of the Genus *Chlorocebus* spp. (George and Yapp 1991), but the Barbary macaque and baboons could also be found among pets. These African primates were widely available in Western Europe from the twelfth century onwards, as demonstrated by their popularity in European iconography (Janson 1952) or by their remains (see Platt 1973 *apud* Walker – Meikle 2012).

After the passing over of the Cape of Bojador in 1434 by the Portuguese explorer Gil Eanes (Albuquerque 1985), new Atlantic routes were discovered. The exploration of sub-Saharan Africa, India and later the Americas, opened Europe to the influx of a massive quantity of new goods (Godinho 1965). Along these trade routes travelled many kinds of goods, natural materials and animals that were treated as any other item or object of value. The exploration of the new worlds offered to European courts a unique opportunity to obtain exotic animals and the trade of animals and their derivatives thereby increased (Toynbee 1973). Collecting exotic

animals of various kinds and keeping them in *menageries* was considered a real status symbol during the Renaissance (Gschwend 2009). *Menageries* acted as an outdoor extension of *Kunstkammers,* actual "cabinets of living curiosities", that aimed to assemble all kinds of luxury goods and exotic objects (e.g. nacre shells, tortoise shells, objects made of ivory, bezoars, stuffed animals and so on, see Pieper 1998). Among the living animals imported mainly from Africa and the Neotropics, primates seem to have been continuously traded and were very sought-after animals in all phases of the European expansion (Asúa and French 2005; Veracini 2011a). The colourful sub-Saharan African monkeys and the smart and small Neotropical ones were new to European nobles and quickly became appreciated as pets. As highlighted by recent works, primate trade in this period was not an occasional phenomenon but part of a routine trade of animals, where primates were particularly valuable and profitable goods (Teixeira and Papavero 2010; Veracini 2011a).

## 9.2 Aims and Methodology of the Present Study

This research aims to investigate the importation and presence of primates from Africa and the Americas in Renaissance Europe in the Early Modern period and to understand if this phenomenon could have had an early impact on the populations of primates, especially on those which have a very reduced range and are threatened with extinction. These kinds of historical studies have demonstrated to be very useful in previous work in order to gain an understanding of the original distribution of many animal species and to provide useful information concerning their conservation management (e.g. see Williams and Steadman 2001). In the current work, in order to assemble a complete picture of this complex phenomenon, data has been gathered that contains reports of trade and the presence of these primates in Renaissance European courts and noble residences from different sources, specifically: (a) Literary sources (chronicles, diplomatic letters, travel and commercial reports, ships' logs, etc.) from Portugal, Spain, Italy, France, Germany, Brazil and England from the second half of the fifteenth century until the end of the sixteenth century; when possible, the manuscripts' original language has been used; (b) Iconographic sources that show primate depictions (paintings, frescos, drawings, woodcuts etc.) where the symbolic meaning and the context of the images have also been considered; (c) Zoo-archaeological data; and, (d) Scientific and philosophical treatises of the sixteenth century. The taxon identification and description of primates reported in these documents have been analysed following morphological keys for taxonomic rank according to zoological descriptions available in scientific literature. As a general reference, primate taxonomy follows Mittermeier et al. (2013).

## 9.3 The Trade of Primates in the Fifteenth and Sixteenth Centuries and Their Presence in Europe

### *9.3.1 Portuguese Monkey Trade and Its Atlantic-European Connections*

During the fifteenth and sixteenth centuries, the presence of African and New World primates has been confirmed in most of the continental European countries including in the most important European courts. Portuguese navigators and explorers were the first to enter into contact with and import sub-Saharan African primates. Portuguese travel chronicles of this period testify that the trade of monkeys was already common from the first decades after the Portuguese discovery of Western Africa. There were specific places where primates could be purchased from local people. The Gambia River was a favourite place for monkey supplies, here monkeys were frequently a gift offered to Europeans by local rulers (Monod et al. 1951). Primates were shipped to Lisbon from the territories of Senegal, Guinea Bissau, Gambia, Sierra Leone, the Ivory Coast, and later also from Central Africa, following the path of explorations and contact with local people. With the discovery of the Americas, many species of Neotropical primates also began to be imported especially from the Atlantic coast of Brazil and the Caribbean coast of Colombia and Central America (Teixeira and Papavero 2010; Veracini 2011a; Masseti and Veracini 2014). Following commercial monopolies and the Atlantic trade routes, goods and animals from the New World were mainly shipped to Lisbon and Seville. In Lisbon, a fruitful trade and exchange of animals was established that from this port reached every part of Europe. Moreover, Portuguese sailors used to bring home smaller animals (monkeys and parrots) as pets, or to be sold for additional income (Johnson 1995). For instance, the Italian explorers of Western Africa Alvise Cadamosto returned to Lisbon in 1456 with 155 parrots which were each sold for a *ducato* (Ramusio 1550). The ships that arrived from India often made stopovers in Brazil before returning to Europe. For this reason many of the animals were referred to generically as being "Indian", making no distinction between their varying places of origin. Lucas Rem (Agent of the German Welser family in Lisbon) wrote in 1508 about "strange parrots and monkeys with long and hairy tails" that he had bought in Lisbon (see Gschwend 2009). Lisbon is remembered, as described by Diego Velho da Chancellaria in 1519, as a place where "monsters, talking birds, diamonds and china" had become quite common (Bedini 1997). After 1500, no other contemporary European place could compete with Lisbon and its court for the presence of strange, marvellous and exotic animals that became part and parcel of everyday life in Portugal (Pérez de Tudela and Gschwend 2007).

At the beginning of the sixteenth century the Fugger family, a prominent group of German bankers, understanding the importance of exotic animals, had begun a large trade of animals moving from Lisbon first to Augsburg and then later to Antwerp, the most important trade centre of Northern Europe at that time (Gorgas 1997). The monkey trade of the Fugger family expanded to such an extent that the

factor of the Fuggers in Antwerp complained about the large amount of work involved with caring for primates in their facilities (Gorgas 1997). If the transportation of large animals could be very complicated, that of small monkeys and parrots was simpler, and thus more easily managed by those who did not have facilities for housing animals. When the artist Albrecht Dürer visited Flanders in 1521, he purchased some exotic animals and objects for his personal *Wunderkammer.* He also bought a *meerkätzlein,* (a "cat of the sea", monkey with a tail), as he described in his diary (Lugli 2005): "I bought a little monkey for 4 gulden, and gave 14 stivers for five fish". This little monkey was probably a marmoset. Marmosets (probably of the species *Callithrix jacchus* Linnaeus, 1758) (Fig. 9.1) seems to have reached Germany alive already by 1513 as documented by the same Dürer. In two "Folios" of The *Book of Hours of Maximilian I* (Veracini and Masseti 2010; Teixiera and Papavero 2010), and in the *Triumphal arch of the Emperor Maximilian I* (Groves 2008), we find marmosets portrayed. The artist purchased and sent back to Nuremberg many artworks, various animal horns, a piece of coral, some large fish fins and a wooden weapon he described as from the "Indies". In his diary he also wrote about a little green bird (probably a parrot) given to him by Rodrigo, the Portuguese agent in Antwerp. He reported having seen many exotic animals at the residence of the Margaret of Flanders, Duchess of Savoy (1480–1530), daughter of the Emperor Maximilian I, observing that, "she kept a collection of monkeys and parrots" (Eisler 1991). Margaret of Flanders is well known for her love for exotic animals, as demonstrated by her portrait with a probably Diana monkey (*Cercopithecus diana* Linnaeus, 1758) (Fig. 9.2), a guenon endemic to Western Africa. Dürer also drew the animals of the *menageries* of the Emperor Charles V (1500–1558) in Brussels, and expressed his lively impression after observing the strength and beauty of a male hamadryas baboon housed there (Fig. 9.3). Apparently, the common marmoset of Brazil (*C. jacchus*) could be easily purchased in Antwerp during the sixteenth century, as we know from the book *Thierbuch* (*Book of Animals*) (Fig. 9.4) written by the Swiss naturalist Conrad Gesner (1551):

> *Sagoin: Ein ardt der Meerkatzen* (A kind of sea cat)
> These animals are imported from Brazil and they can be found in Antwerp; they are not big monkeys, they are very lovely and quick; they are completely covered by a beautiful soft fur; they eat dry grapes and white bread quickly, and they can be bought for 50 crowns.

The common marmoset is a small, beautiful monkey native to the Northeastern coast of Brazil (in the states of Piauí, Paraiba, Ceará, Rio Grande do Norte, Pernambuco, Alagoas and Bahia), which was one of the first regions explored by the Portuguese after the official discovery of Brazil by Alvares Cabral in 1500. This species, together with others native to the same region (e.g. capuchin monkeys of the genus *Sapajus* Kerr, 1792), was one of the first to reach Europe alive, as we know from the iconographic record. The common marmoset is a frugivorous and insectivorous primate which makes it more adaptable to different habitats and diets than other taxa of the same family. This might be the main reason for the ability it demonstrated to survive the months of navigation necessary for its trade and for its great popularity in Europe. In fact, some chronicles report the difficulties of

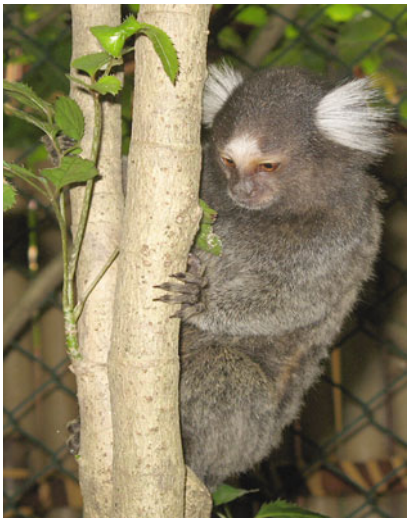

**Fig. 9.1** The common marmoset (*Callithrix jacchus*) endemic of the Northeast of Brazil was one of the first primates brought to Europe after the discovery of America (Photo: Cecilia Veracini)

crossing the ocean experienced by these small monkeys, as explained by the Portuguese chronicler Pero de Magalhães Gândavo in his *História da Província de Santa Cruz*, published in 1576:

> There are also two little ones (i.e. small monkeys) on the coast, slightly larger than weasels; they are called *Sagois* and there is a blond and a brown one. […] and they are so dainty and delicate, that when they are taken from their country and shipped to this kingdom (i.e. Portugal) and arrive to the colder air, almost all die at sea, and only few manage to survive, to our great wonder (Gândavo 1965).

Konrad Gesner also reported the arrival of a drill, *Mandrillus leucocephalus* (F. Cuvier, 1807) native to the Guinea Gulf in Augsburg (Fig. 9.5). In the *Tierbuch* he wrote that this beast "caused a great sensation when it arrived in Augsburg"; the drill was inserted into a chapter of the book dedicated to wolves:

> *Von dem Wolff* (On the wolf)
> This beast is found in Índia, it climbs on the trees and picks fruit; respects elephants, but chases other animals; it has always two children, male and female.

Several other species of monkeys were exported to Northern Europe during the Renaissance by the Portuguese. The Flemish artist Joachim Beucklaer in 1566 made one of the most beautiful portrayals of two African guenons: *Cercopithecus petaurista* (Schreber 1774) and *C. diana* or *Cercopithecus roloway* Schreber 1774 (Fig. 9.6). Apparently, they were sold at the Antwerp market in the second half of the sixteenth century (Veracini 2011a). From 1479, the Portuguese had a fortress in Ghana, a settlement called *Mina,* which was Portugal's West African headquarters for trade and the exploitation of African wealth (Ballong-Wen-Mewuda 1993). In 1637, it was conquered and came under Dutch control. Many monkeys such as those portrayed by Joachim Beucklaer could have come from this place, as demonstrated by some data gathered on Catherine of Austria (the youngest sister of the

**Fig. 9.2** Margaret of Flanders, daughter of the Emperor Maximilian I, portrayed with a Diana monkeys (*Cercopithecus diana*), (Anonymous first half of the sixteenth century)

Habsburg emperor, Charles V and spouse of the King of Portugal, John III). In the second half of the sixteenth century, she assumed a leading role in the procurement of exotic and rare animals for herself and her extended Habsburg family in Spain, Central Europe and the Netherlands (Pérez de Tudela and Gschwend 2007). She

**Fig. 9.3** Sketch of the *menagerie* of the Emperor Charles V (1500–1558) in Brussels, with an adult male of hamadryas baboon (*Papio hamadryas*) by Albrecht Dürer, 1521

invested a great deal in the acquisition of curious and extraordinary species, helped by her global network of acquaintances and connections. In April 1557, Simão Rodrigues, the factor of São Jorge da Mina in Ghana (*Mina*), sent her a cage with parakeets and two civet cats (Pérez de Tudela and Gschwend 2007). Another official, Afonso Gonçalves Botafogo, sent another paraqueet, six civet cats, two monkeys (*bugios* in old Portuguese language) and one parrot, and in a second shipment, Botafogo gave the queen two bearded monkeys (possibly two specimens of the species *C. roloway*) known for having a large beard and for being endemic to Ghana.

Capuchin monkeys from Brazil were other very popular pets in the sixteenth century. They had already reached Germany by 1508 as documented by some engravings of the great German painter and printmaker Hans Burgkmair (1473–

Von dem Wolff.

Diese art der Wölffen ist keinem der alten Scribenten bekant gewesen. Zu zeiten in dem Teutschen Meer an dem Britanischen gestad gesehen worden: mit seiner gestalt dem Irbischē Wolff sehr ähnlich/mit einem grossen kopff/ seine augen mit vil langen haaren vmbsetzt mit nasen vnd zänen wie ein Hund/ mit starckem bart bey dem maul. Sein haut von aufgerechten haaren rauch/gantz voller schwartzer flecken. Sein schwantz lang lecht/dick von fleisch vnnd haar/mit anderer gestalt dem Wolff gleich.

Von ardt deß Thiers.

Der ardt sol es sein/daß es zum theil deß Wassers gelebe/zum theil der erden/es ersettiget sich der merer theil mit fischen. Als er heimsch gemacht: sol er zimlich lang gelebt haben.

Volgen hie Conterfacturen Etlicher Thieren/so in diesem Büch an jhr recht ort nit kommen/ sampt anderen so verbessert worden sind.

Von einem frömbden Affen geschlecht.

Galiopithecus. Sagoin. Ein ardt der Meerkatzen.

Von jhrer gestalt vnd wo sie zu finden.

Frömbde Thier werden auß Frömbden/ Weiten landen gebracht/ist menigklich wol bekant/ also sind diese thier kurtzlich auß den Newen land Bresilia gebracht worden/ gen Antorff/ ist ein sehr groß thier/gantz lieblich/geschwind/doch forchtsam/ mit gantz lindem beltz bekleidet. Sie fressen fasten speiß/weinbeeren/ weißbrot vnd dergleichen. Ein solches ist vmb fünffzig kronen verkaufft worden.

Diese

**Fig. 9.4** Representation and description of a marmoset sold in Antwerp (*Tierbuch*, Konrad Gesner 1551)

1531). In 1508, Burgkmair published 6 engravings illustrating the journey of the merchant Tyrolean Balthasar Springer in the East Indies (Leitch 2009). In two of these woodcuts, Burgkmair inserted a capuchin monkey (Fig. 9.7). The monkey depicted resembles a golden-bellied capuchin monkey, *Sapajus xanthosternos* (Wied-Neuwied 1826), a rare primate native to the Bahia State of Brazil (see Veracini 2011b). Later on Burgkmair included two other monkeys (a capuchin and a Barbary macaque) in his famous work *The Triumphal Carriage of Maximilian I* (Veracini and Masseti 2010; Veracini 2011a). Capuchin monkeys are also present in

Von dem Wolff.

Von seiner gestalt / vnd wo diß Thier zu finden.

Dieses Thier ist mit grossem Wunder gen Augspurg gebracht vnd gezeigt worden deß 1551. jahrs. Wart gefunden in den grossen einödinen deß Indianischen lands / gar selten. An seinen füssen hat es finger als der mensch / vnd so man jm deütet so keert er den arß dar.

Von art vnnd natur deß thiers.

Pffel / Bieren / vnnd allerley andere frücht isset diß thier / auch bretzt trinckt insonderheit gern wein. So es hungerig ist so ersteigt es die böum / schüt die frücht herab. So es eine Heffanten vnder dem baum ersicht / so lasst es jn belaibe / alle andere Thier mag es nit gedulden / sonder treibt sie von dannen. Ist von natur freudig / vorauß gegen den Weiberen / gegen welchen es sein freudigkeit viel erzeigt.

Das weiblein deß geschlechts gebiert alle zeit zwey zu mal ein par / nemlich ein mänlein vnd weiblein. Ist das recht / war eigentlich thier der alten Hiæna genannt.

Von dem Vielfraß.

Gulo apud recentiores, Lupis aut Hiænis cognatus, vt videtur.

Ein Vielfraß.

Von seiner gestalt vnnd Wo sie zu finden.

Solche

**Fig. 9.5** Representation and description of a drill, *Mandrillus leucocephalus* endemic to the Guinea Gulf, arriving in Augsburg (*Tierbuch*, Konrad Gesner 1551)

many other German artworks of the sixteenth century. Cranach the Elder (1472–1553) decorated some *folios* of the *Book of Hours of Maximilian I* with a family of capuchin monkeys. Even after the reign of Maximilian I, capuchins seem to be quite common in Northern Europe, as evidenced in the artworks of painters such as Jan Gossaert (1478–1532), who portrayed a blond capuchin monkey (*Sapajus flavius* Schreber 1774), and Pieter Coecke van Aelst the Elder (1502–1550) and Nicolaes de Bruyn (1571–1656). In most of these artworks, morphological rendering of capuchins is accurate, indicating that the painters presumably painted from live

**Fig. 9.6** *Cercopithecus petaurista* and *Cercopithecus diana* vel *roloway* portrayed by Joachim Beucklaer (1566) in the painting *Seller of animals in Antwerp*. Museum of Capodimonte, Naples

specimens. Moreover, a skull of a capuchin monkey was found in an archaeological excavation of the sixteenth century in Holland (Masseti personal communication). The trade of these monkeys is also commented on by many of the American travellers of Brazil such as Hans Staden (Staden 1970), André Thevet (Thevet 1982), Jean de Léry (1578), Fernão Cardim (1997), Gabriel Soares de Souza (Soares de Souza 1851) and others.

### *9.3.2 The French "Affair"*

The number of animals and other natural products (e.g. dyewood, cotton, cocoa beans, copper, cochineals, etc.) brought to Europe from Brazil grew exponentially throughout the sixteenth century, as recounted in the rare ship logs that still exist. In 1511, the Portuguese ship *Bretoa* "brought back five thousand red trees, twenty two parakeets, sixteen callitrichids (small monkeys), fifteen parrots and three monkeys" (Anonymous 1881). All of these animals were valued at 24,220 *reis* (Portuguese currency), of which a quarter was paid to the King. The monthly salary of a caravel captain in the sixteenth century corresponded to 2000 *reis*, while a cabin boy received 933 and half *reis* (Teixiera and Papavero 2010). Thus, the sale of these animals represented an important increase in navigators' incomes. Considering this latter aspect no wonder if other European countries wanted to participate in this

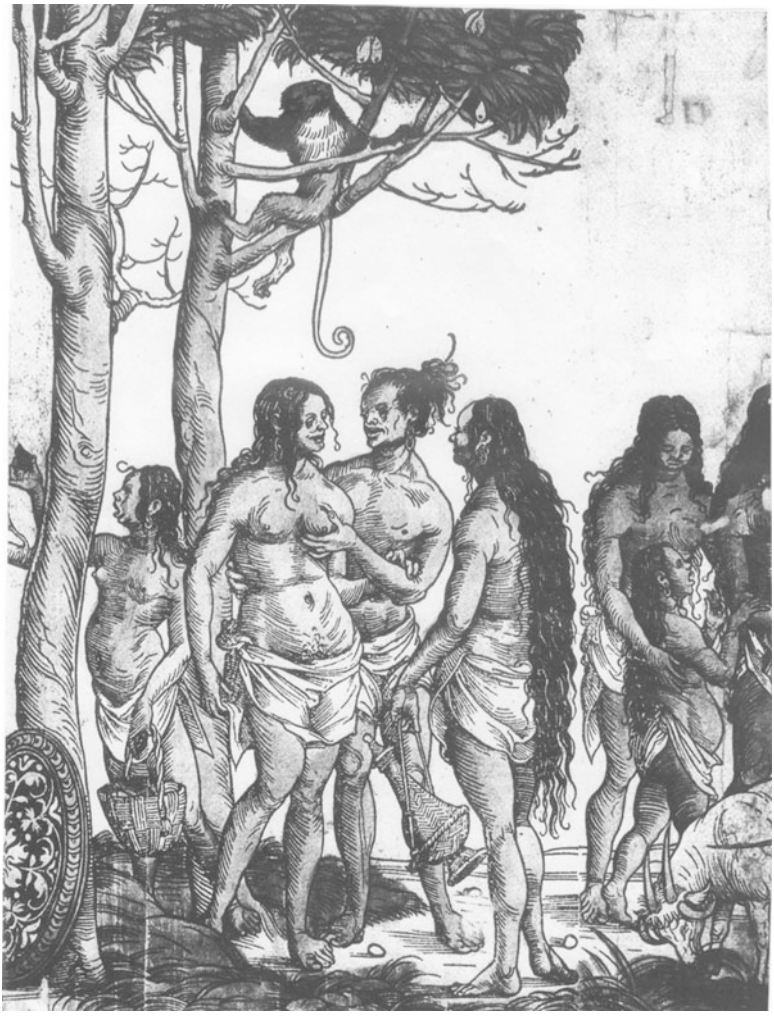

**Fig. 9.7** Portrayal of a capuchin monkey (*Sapajus* cfr. xanthosternos) from Brazil in *Natives with flock of animals* (Hans Burgkmair, 1508). One of the first representations of a New World monkey

commercial activity. The December of 1530 the French ship *La Pélerine,* owned by Orbessan Bertrand, Baron of Saint-Blancard and commander of the French in the Mediterranean, left Marseille in the direction of Pernambuco. After having destroyed the Portuguese settlement of the Rio Igaraçu at Pernambuco (where there was one of the first permanent settlements built by the Portuguese in 1516, see Johnson 1995), came back in March of 1531. In September of 1531, the Portuguese captured this ship in Malaga where it held 300 tons of wood; 1.8 tons of cotton, seeds and various oils, 3000 furs of felids and other animals, 600 parrots and 300 monkeys

**Fig. 9.8** Francis I, King of France, is remembered as a sovereign who showed a particular passion for animals. Here he is portrayed with an African grivet or vervet monkey (*Chlorocebus* spp.) at an apparently official meeting (Anonymous, first half of the sixteenth century)

(Dean 1997). Teixeira and Papavero (2010) reported on the value of the *Pelerine*'s animals: 3000 skins, 9000 ducats; 600 parrots, 3600 ducats; 300 monkeys, 1800 ducats (i.e. approximately 1000 Euros per specimen). The case of the *La Pélerine* was not isolated, because since 1503 when the maritime connection between France and Brazil was discovered, it had been used by the wealthy French traders' armed ships, commanded by Portuguese (called traitors because they had revealed the routes for arriving in Brazil), to go to the West Indies. Normandy became a key gateway for goods and animals from the Americas (Bueno 1988). The King of France, Francis I of Valois (1494–1547) (Fig. 9.8), came to the throne in 1515 and did not comply with the Treaty of Tordesillas, which divided the world between Spain and Portugal, and consequently broke all the peace treaties. This fact transformed a number of captains into greedy pirates, who were employed in his service to import large quantities of Brazilian dye-wood, useful in the textile production of Dieppe and Rouen (Johnson Tomlinson 1970). In this context the traffic carried on

by Jean Ango, a merchant and banker, and future Viscount of Dieppe (Guérin 1900), should be mentioned. He had more than 50 ships that sailed in many of the known seas. Through the trade he carried on between 1525 and 1530, he earned large sums of money with which he built a large residence in Dieppe made from *jacaranda* (a Brazilian precious hardwood) and red tree. It is said that his house was always full of indigenous people and animals arriving from Brazil which roamed and mingled freely in the courtyard of the house. What was a probably a common presence of monkeys in Dieppe is depicted in a frieze on wood, the "*Frise des Sauvages*", housed in the Saint-Jaques church in Dieppe, and also described in many historical documents. As reported by Anthiaume in 1916 (Anthiaume 1916 *apud* Teixeira and Papavero 2014), "travel to Brazil multiplied from 1516 to 1550. The Norman sailors were in continuous contact with the native Brazilian people, who provided them with dye-woods, spices, cotton, parrots and monkeys." Interestingly, the common marmoset (called *sagoin* in the Tupi-Guaranì native language) enjoyed such popularity in Normandy that it became a character in a popular *querelle* called the "*Valet de Marot contre Sagon*" of Bonaventure des Périers (Des Périers, 1537 *apud* Teixiera and Papavero 2014; see also Léry 1578). In 1555 in Rio de Janeiro the "*France Antartique*" was founded at the request of the French King Henry II. The French Calvinist missionary Jean de Léry (1534–1611), in his narrative *Journey to the land of Brazil* published for the first time in 1578 (Léry 1578), reveals the natives' hunting habits and how animals were considered to be the same as any other good for exchange with the Europeans, making some of these new species very common in the Old World:

> There is also in this land of Brazil a great number of small black monkeys that natives call *cay* (capuchin monkey); because many of them are already found in Europe, it seems pointless to describe them. […] Indians, after having domesticated them at home, exchange them with foreigners who travel there looking for any goods.

### *9.3.3 The Italian Rulers*

Italian rulers had a strong tradition of keeping exotic animals for their imaging (e.g. see Mosco 1985; Lazzaro 1995). The elaborate network of ambassadors and agents that the most important Italian princes sent to the main centres of Atlantic trade (Lisbon, Seville, Antwerp), besides reporting on the evolution of discoveries and Atlantic businesses, supplied their lords with exotic wonders. Animals were often used as gifts especially for weddings, the occasion of accession to the throne, and for the reception of ambassadors or in international diplomacy such as embassies (Ringmar 2006; Belozerskaya 2006). One such embassy, sent to Pope Leo X by the Portuguese king Manuel I in 1514, is a very famous example (Bedini 1997). Besides the well-known Indian elephant called Hanno, other American and African animals

were sent to the Pope. These beasts enriched the *menagerie* of Pope Leo X who, like his late father Lorenzo de Medici, was in the habit of collecting rare and exotic animals which originated from all corners of the world. In 1519, the Renaissance artist Andrea del Sarto made a fresco, ordered by the Pope Leo X, in a Medici residence in Florence where the first representation of the rare blond capuchin monkey, *S. flavius,* endemic to North-eastern Brazil, (see Fig. 9.9) appeared. As noted by Masseti and Veracini (2010) it was probably an animal of the Pope's *menagerie.* Primates were very sought-after animals by Italian rulers in this period as demonstrated by the many other iconographic sources found in the country. Among a few other examples is the first scientific representation of the Golden-bellied capuchin monkey (*S. xanthosternos*) which was painted between 1507 to 1510 by Gerolamo Genga in a noble residence of the Sienese ruler Pandolfo Petrucci (Veracini 2011a), a common marmoset portrayed with the Cardinal Ciocchi dal Monte in Rome by Sebastiano del Piombo in 1516 (Garas 1994–1995), and another marmoset portrayed with Margaret of Austria, daughter of the Emperor Carlo V (1538–1540). Other primate representations can be found in the Medici residences in Florence (see Masseti 1991, 2008). The Medici family had a long tradition of using and possessing exotic animals (Lloyd 1971; Belozerskaya 2006). In 1537, when the family regained power after a period of struggle and exile, Cosimo de Medici, Duke of Florence, employed important artists to create works whose allegorical meaning commemorated the greatness of Lorenzo, whose image was revisited in a classical manner and depicting exotic animals he had received as gifts which had characterised his reign (Lazzari 1995) (e.g. see Vasari, *Tributo a Lorenzo de Medici,* 1556). A noble Florentine, M. Olivieri, on the 12th of October 1547 sent two baboons to the Duchess "Eleonora of Toledo", wife of Cosimo de Medici, as a sign of loyalty (Veracini 2011a). He provided instructions regarding their care and feeding, observing that:

> when given almonds or walnuts in their shells, by using a small rock the baboons will crack them gently open, much as a person would.

In 1580, various exotic animals could be seen in Florence, as Montaigne notes during his trip to Italy in 1580–1581. Duke Francis I, Cosimo de Medici's successor, was equally interested in the products from the newly discovered lands. He received and requested many varieties of plants and animals which were added to enrich his *studiolo* (a sort of cabinet of curiosities) in Palazzo Vecchio in Florence. Monkeys could arrive in Florence from Spain at the Medicean port of Livorno, as reported in the Universal Correspondence of the Grand Dukes of Tuscany (ASF, Mdp 538a., 14767. 1568). Francis I was a friend and admirer of the naturalist Ulisse Aldrovandi, whose work (Aldrovandi 1637) and watercolours (Aldrovandi, *Tavole*) are very rich sources of depictions of primates from Africa and the New World (Capanna and Gippoliti 2007; Veracini 2012).

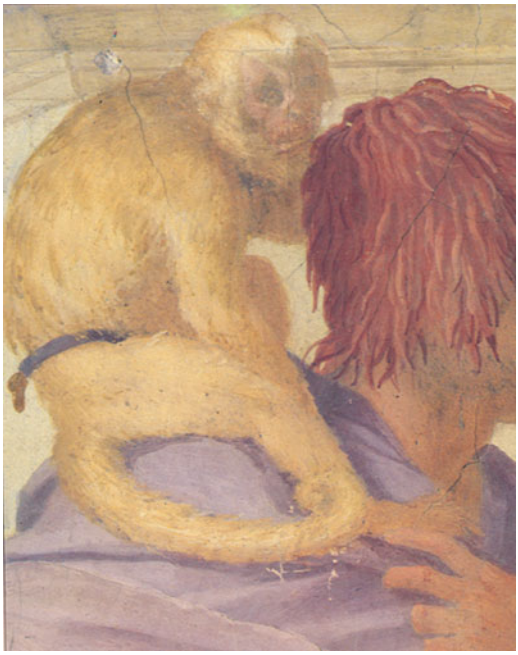

**Fig. 9.9** The blond capuchin monkey (*Sapajus flavius*) portrayed by Andrea del Sarto in 1519 in the *Villa de Medici* of Poggio a Caiano (*apud* Masseti and Veracini 2010)

### *9.3.4 The Spanish Interest in Monkeys and the Presence of Monkeys in England*

There still isn't quantitative data available about the importation of monkeys from the Spanish colonies in South and Central America, but evidence of a significant shipping of monkeys to Spain is found in the work of Gonzalo Fernández de Oviedo (Fernández de Oviedo y Valdez 1852), a historian and scholar, and the official Chronicler of the West Indies under Charles V. In his work "*Historia General y Natural de las Indias*", he says:

> In many parts of the mainland there are wild monkeys of so many kinds and differences which cannot be described in just a few words if one had to explain its different forms and its countless playful pranks. […] And because every day they are brought to Spain I will not say much things about them.

Other Spanish language authors, such as Tomáz Lópes Medel, comment the trade of primates from South America. Medel travelled to Guatemala as an official observer for the crown in 1549 and went to various locations in Central and South America. He referred in his writings to the various species of monkeys present there, and indicated the trade of these to Seville, whose survival was facilitated, in his opinion, by the warm climate of the southern regions of Spain.

During the second half of the sixteenth century, the Spanish royal family and its extended Augsburg family in Vienna benefited enormously from family ties with

Portugal to acquire domesticated and exotic animals. Exotic animals were continually requested by and invoiced to Vienna or Prague, sometimes with the help of the imperial ambassador in Spain, Hans Khevenhüller (Pérez de Tudela and Gschwend 2007). An anonymous letter written in Milan in 1578 talks about Don Remiro Nuñez de Guzmán, a Spanish nobleman on his way to meet the Emperor Rudolf II, who was to bring pets as a gift from Philip II:

> […] In this place there is me, Don Remiro Nuñez de Guzman, brought by the Catholic King (Philip II) to the Majestic (Emperor Rudolf II of Austria), who has to leave today for bringing a gift of 22 young very beautiful horses, a mule, a lion, a leopard, seven monkeys, and six greyhounds […]. (ASF, MdP 3254 f. 427, 1578.).

The children of Philip II lived in the Alcázar palace in Madrid surrounded by exotic animals such as parrots and monkeys. Thrushes, starlings, finches and exotic birds were not only housed in palace aviaries, but also traveled in cages between residences, as did tame squirrels, monkeys and parrots (Pérez de Tudela and Gschwend 2007). His daughter, The Infanta Isabella Clara Eugenia, was portrayed in her youth with a marmoset in 1571 by the painter Alonso Sanchez Coelho (see Urbani 2007), and later (ca. 1585) with a golden lion tamarin (*Leontopithecus rosalia* Linnaeus, 1766), endemic to the state of Rio de Janeiro in Brazil, and a cotton-top tamarin from Colombia (*Saguinus oedipus* Linnaeus, 1758) (Fig. 9.10). At a later date also the queen of Spain, Margaret (1584–1611), was portrayed by Bartolomé González y Serrano, (ca. 1600) with another golden lion tamarin (see Veracini 2011a).

Although less frequently than in Germany and southern Europe, monkeys were found also in Renaissance England. The presence of monkeys is testified to by some paintings of the Tudor family such as the *Portrait of a Boy with a marmoset* by Hans Holbein (Groves 2008) and the portrait of Catherine of Aragon, the first wife of Henry VIII, by Lucas Hombolte (or Horenbout or Hornebolte) dating to around 1536 (Urbani 2007). In this portrait, the queen is shown holding a capuchin monkey, tentatively identified by Masseti and Veracini (2010) as a young white-fronted capuchin (*Cebus cesarae* Hershkovitz, 1949). In addition, in 1562, Alessandro Magno, an Italian merchant's son, wrote his account of a popular entertainment event that reflects a certain level of popularity of monkeys in England. In the Bear Garden in London he saw a show where a horse was taken into the ring with a monkey in the saddle. The horse was then attacked by dogs:

> It is wonderful to see the horse galloping along, kicking up the ground and champing at the but, with the monkey holding very tightly to the saddle, and crying out frequently when he is bitten by the dogs.

This type of entertainment was also commented on by writers of the period, or as in the case of St. Pavles-Church in 1621, criticised when reporting the use of baboons and "apes" (Barbary macaques) for these kinds of activities (Fudge 2002).

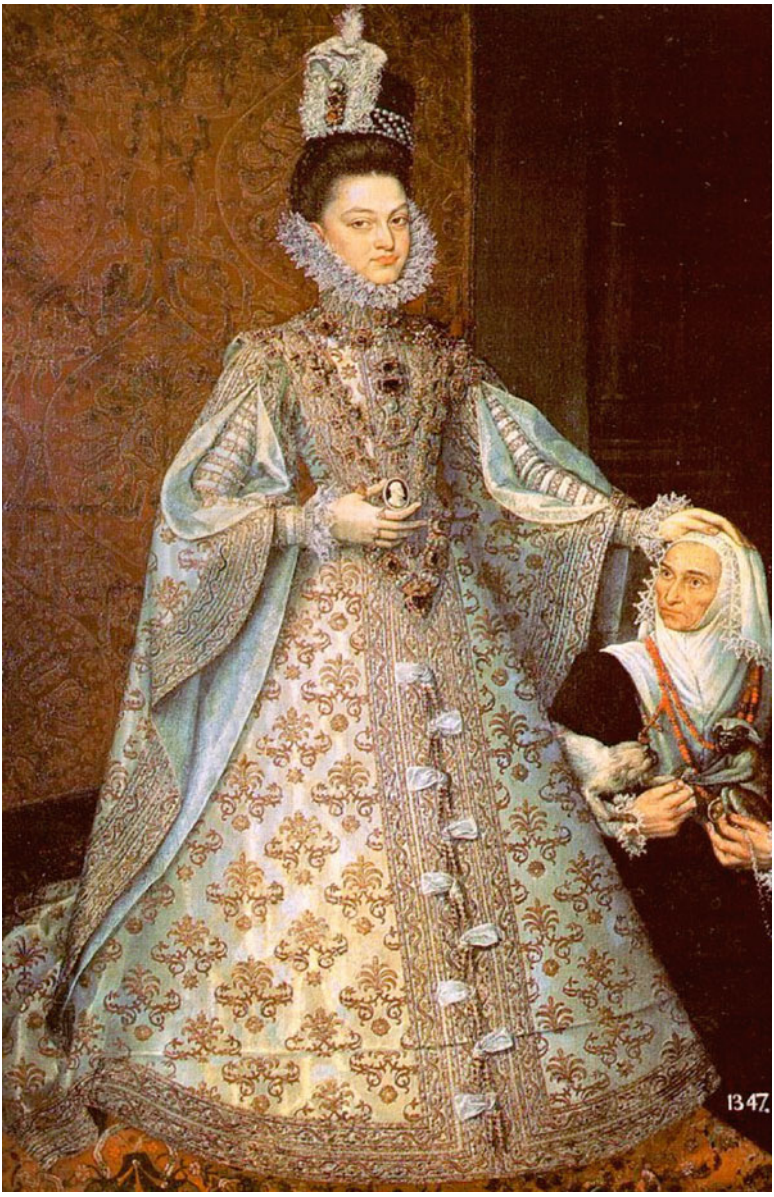


**Fig. 9.10** The Infanta Clara Eugenia with Ana Magdalena Ruiz with a golden lion tamarin (*Leontopithecus rosalia*) from Brazil and a cotton top tamarin (*Saguinus oedipus*) from Colombia (Sánchez Coello, ca.1585). Museo del Prado, Madrid

## 9.4 Consequences of Primate Trade: Inference and Hypotheses

By comparatively analysing the iconographic and literary sources where traded primates in the fifteenth and sixteenth centuries are present, the following species can be found: (a) *taxa* from Africa: *M. sylvanus, Chlorocebus sabeus* (Linnaeus, 1766), *Chlorocebus aethiops* (Linnaeus, 1758), *C. diana*, *C. roloway*, *C. petaurista*, *Cercocebus torquatus* (Kerr, 1792), *Papio hamadryas* (Linnaeus, 1758), *Papio anubis* Lesson, 1827, *M. leucocephalus* and probably *Cercocebus atys* (Audebert, 1797) and *Papio papio* Desmarest, 1820; (b) *taxa* from the Neotropics: *C. jacchus*, *Callithrix geoffroyi* E. Géoffroy, 1812, *Callithrix*. spp., *L. rosalia*, *S. oedipus*, *S. flavius*, *S. xanthosternos*, *Sapajus nigritus* (Goldfuss, 1809), *Cebus capuchinus* (Linneo, 1758), *Saimiri sciureus* (Linnaeus, 1758), probably *C. cesarae, Cebus olivaceus* Schomburgk, 1848 and also likely specimens of the Family Atelidae. Regarding African primates, quantitative data about the consequences of its trade have not yet been established because the investigation is still ongoing. Nevertheless, historical sources which have been examined so far reported a vigorous level of business activity by the Portuguese and other European nations in Western and Equatorial Africa during the time period under consideration. From the second half of the fifteenth century until 1586, the Portuguese were assiduous at fairs and markets which were held in Gambia and Guinea, "where there were sold all the things that were being produced in those lands and those in the surrounding" (D'Almada 1594). Not only did the Portuguese do a lot of business in Gambia, but so did the English, Flemish, French and Spanish, as told by the Portuguese writer D'Almada (1594), where animals (such as civet cats, parrots, monkeys) and animal derivates (ivory, skins, etc.) were the main exported products. For instance, from 1517 until 1561, 112 ships departed from the Portuguese settlement of *Mina* in Ghana (Godinho 1965) and one can only imagine the quantity of animals shipped to Lisbon together with gold and other goods. The trade of primates seems to have not led to rapid local extinction (as did happen with other mammals such as elephants, hippos and monk seals in Western Africa), nevertheless, their populations are likely very reduced today in comparison with the abundance described in the pre-colonial period by almost all of the travellers of the era (e.g. Monod et al. 1951). Today, most Western African primate species are endangered with extinction (Mittermeier et al. 2013).

Regarding Neotropical primates, some additional inferences about the impact of the their trade are possible, as it can be established from documents that one ship could transport up to 300 monkeys (e.g. the ship *La Pelérine*). Considering the high frequency of commercial voyages and the quite limited geographical range of some of these species, it is possibly that this trade could have locally damaged some primate populations (e.g. the Brazilian species of *S. flavius, S. xanthosternos* and *L. rosalia*). It is obviously impossible to quantify the exact number of monkeys traded in the sixteenth. However, it is possible to estimate the impact of this trade by cross-referencing contemporary biological and ecological knowledge with historical data. Teixeira and Papavero (2010) estimate that 188–226 monkeys were shipped each

year from Brazil by the Portuguese, and that figure can be correct or even underestimated considering the 300 monkeys recorded to be brought back to Europe by *La Pelerine.* Taking as an example the blond capuchin monkey (*S. flavius*), endemic to the coastal area of Northeastern Brazil (in the states of Rio Grande do Norte, Paraíba, Pernambuco and Alagoas), which had an originally small geographical distribution (Mittermeier et al. 2013), such a trade could have had a notable impact on this species. The state of Pernambuco, encompassing the *S. flavius*'s geographical range, was one of the three main centres for supplying dye-wood. The first European settlement in Brazilian territory was a *feitoria* (fort), built in 1516 by Cristovão Jacques, *fidalgo* of King Manuel I, at the entrance to the bay of Itamaracá Island, closed to Recife, today capital of the state of Pernambuco (Albuquerque 1993). As noted, the French and Portuguese competed in this region with each other to monopolise access to natural products in the first decades of the sixteenth century. It is estimated that during the sixteenth century, something approaching 8000 tons of dye-wood from Brazil a year were imported to Portugal and France (Dean 1997). Later on, this area became one of the most important places for sugar cane production (Oliveira, de 1990). As already noted, voyages of the time were dependent on winds and seasons, so ships returning from India might easily reach the coast of Brazil brought by the winds, and thence to Europe. The Portuguese crown did its utmost to systematically integrate the Brazilian coast within the Atlantic trade routes, and many vessels coming from India stopped there. As noted by Pieper (Pieper 2008): "The import of South American hides was only profitable because they were shipped to Europe as ballast on the return voyages of highly valued goods like spices, precious metal or silk textiles which constituted the larger part of goods brought to Europe that paid for the transportation cost of hides and timber." From 1497 to 1612, 806 vessels left Portugal in the direction of India (Falcão 1859) and to this figure we have to include an undetermined number of French and Portuguese ships which went to Brazil directly from Europe. Hypothesising that just one third of the ships from India might have stopped in Brazil and each of them return with a mean of 100 monkeys (a purposefully underestimated projection, just one third of the number of monkeys carried by *La Pelerine*), it can be estimated that ca. 26,866 animals were taken from the wild (above all in the main centres for supplying dye-wood) over the course of about one century. Fialho and Gonçalves (2008) suggest a population density of two social groups with a mean of seven individuals each per square kilometre for *S. flavius,* thus in order to fill ship with a cargo of 100 or more individuals, a vast area would have to have been exploited. Considering the destruction of the costal Atlantic forests for sugar cane plantations and dye-wood harvest, it is possible to estimate a drastic population decline in the Pernambuco State of this species already by the end of the sixteenth century. The systematic trade of capuchin monkeys (and other species from the Atlantic coast of Brazil) continued to occur throughout the seventeenth century, and even in the following centuries, as revealed by many iconographic and literary sources. These are probably the reasons why the

blond capuchin monkey disappeared for two centuries, the last report having been by the German naturalist Johann Schreber in 1774 (Schreber 1774). In fact, the blond capuchin has only been recently rediscovered and confirmed as an extant species by De Oliveira and Langguth in 2006. Some years later, Masseti and Veracini (2010) found the first scientific representation of this species in 1519 in a fresco in Italy proving the early trade of this species. Nowadays, *S. flavius* is classified as Critically Endangered on *The IUCN Red List* (2016) and is one of the five primate species targeted by the Brazilian government among its conservation priorities in Northeastern Brazil, with a total population of only 1000–2000 (Mittermeier et al. 2013). This case study shows how historical issues, coupled with contemporary issues in Brazil (such as forest destruction and illegal pet trade), could have dramatically damaged the populations of this and other primates in Brazil (Veracini and Bezerra 2013). The story of the blond capuchin monkey provides us with a picture of the size of traffic in biodiversity in the Age of Discovery, and gives us an idea of the profound impact that anthropic actions have had in moulding and shaping primate populations.

## 9.5 Concluding Remarks

(a) The trade of monkeys from Africa and South and Central America in the fifteenth and sixteenth centuries was not an occasional phenomenon but part of a routine trade of animals where primates were a particularly valuable and profitable goods.
(b) Primates were very appreciated high status pets and played an interesting role in European cultural and artistic circuits. Early Modern European literary and iconographic sources suggest the existence of an international network of primate trade involving the main strategic locations of the overseas trade.
(c) More than 20 *taxa* of monkeys were imported in this period to Europe.
(d) In some regions of Brazil early primate exploitation can have drastically contributed to the reduction of some primate populations.

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